

## REMARKS

## INTRODUCTION

In view of the following, reconsideration of the allowability of the claims is respectfully requested.

Thus, claims 1-21 are pending and under consideration.

## REQUEST FOR WITHDRAWAL OF FINALITY

In view of the following, it is respectfully submitted that the outstanding interpretations of the relied upon references are incorrect, and that the corresponding rejections are unsustainable.

Regarding Johanson, U.S. Publication 2004/0032739.

The Office Action has interpreted FIG. 5 of Johanson, as disclosing the smaller parabolic reflector 50 as reflecting light toward the larger parabolic reflector 40, as independent claim 17 claims a reflector reflecting light emitted from a lamp light source and an intercepting unit reflecting a portion of light emitted from a lamp light source toward a reflector "so that light emitted from the reflector has an annular light distribution."

However, Johanson particularly details that that: "[a]s illustrated by line E, parabolic reflector 50 is designed to reflect light emanating from arc 61 which would not otherwise contact parabolic reflector 40. Parabolic reflector 50 reflects additional light into an illumination tube. In this illustrated preferred embodiment, the light reflected by the second parabolic reflector 50 is preferably substantially coaxial with light reflected by first parabolic reflector 40." See paragraph [0032] of Johanson.

Thus, parabolic reflector 50 does not reflect light toward parabolic reflector 40, as proffered in the Office Action.

The Office Action references light beam G1 in the rejection of claim 17, indicating that G1 corresponds to the light beam reflected from parabolic reflector 50 to parabolic reflector 40. However, Johanson particularly explains that light beam G1 is a beam of light that is reflected off a third reflective surface 72 to capture light that is not captured by either parabolic reflectors 40 or 50. FIG. 5 of Johanson further illustrates that light beams G1 and G2 both do not further reflect off parabolic reflector 50 after reflecting off reflective surface 72. See paragraph [0035] of Johanson.

Lastly, it is noted that the resultant generated light is not an annular light distribution, as

required by independent claim 17. See paragraphs [0027]-[0028] of the present specification, "Here, since a middle portion of light emitted from the lamp light source 6 is intercepted by the intercepting unit 7, light L emitted from the light system 5 becomes annular."

FIGS. 5A and 5B of the present application clearly illustrate such an annular light distribution, which would be different from any light distribution generated by Johanson. In particular, such an annular light distribution is completely counter to the preference in Johanson to capture as much light as possible.

Thus, Johanson has been misinterpreted and fails to disclose the claimed invention of claim 17.

Regarding Kurtz et al., U.S. Patent No. 6,577,429

The Office Action has interpreted the embodiment of FIG. 10 of Kurtz et al. as disclosing a majority of the claimed features of claims 1, 10-16, and 21, and in particular, regarding the claimed first reflecting mirror and second reflecting mirror, with the second reflecting mirror reflecting light from the first reflecting mirror back toward a display device included in the first reflecting mirror, and a projection lens unit enlarging and projecting a color image formed by the display device onto a screen, as recited in independent claim 1. Independent claim 21 includes the first reflecting mirror, the second reflecting mirror, and the display device, but not the claimed projection lens.

The Office Action has indicated that micro-mechanical mirror array 280 of Kurtz et al. can be interpreted as corresponding to the first reflecting mirror, light stop 285 of Kurtz et al. has been interpreted as corresponding to the second reflecting mirror, and the Office Action has interpreted col. 19, lines 4-13, as supporting the conclusion that the micro mechanical mirror array 280 further includes a display device receiving light reflected from the light stop 285.

Conversely, as described in col. 19, Kurtz et al. details that the micro-mechanical mirror array selectively reflects light toward the aperture 290 for the projection lens 205 or to the light stop 285. See Kurtz et al., col. 19 in lines 10-15, "Individual pixels are formed by micro-mirrors that either direct light through the aperture 290 of the projection lens 205, or toward a stop 285 (i.e., a Schlieren optical system). Pixel brightness is controlled by selecting the proportion of time within a frame that light is directed through the lens aperture 290" (Emphasis added).

Thus, micro-mechanical mirror array 280 selectively reflects light toward the projection lens 205 or toward the light stop, i.e., the light stop performs the exact function its name infers, it is a depository for light so such doesn't interfere with the light being sent through the projections lens 205 for output of the system.

The Office Action has indicated that "it is well known in the art that one of the elements in a Schlieren optical system is a movable plane mirror." See page 7 of the Office Action.

However, the fact that the light stop may have a movable mirror does not mean that the same movable mirror, in Kurtz et al., reflects light out of the light stop 285 back toward the micro-mechanical mirror array 280. There is **no** support in Kurtz et al. that light is reflected back from the light stop 285, or that such a reflection out of the light stop 285 would be beneficial or even desired.

The description in Kurtz et al. clearly explains how the light stop 285 is used, i.e., by repeatedly selecting between the light stop 285 and the aperture the "[p]ixel brightness is controlled by selecting the proportion of time within a frame that light is directed through the lens aperture 290." Kurtz et al. col. 19, lines 13-15.

Thus, the Office Action's interpretation of the mechanical mirror array 280 as corresponding to the first reflecting mirror, and the light stop 285 corresponding to the second reflecting mirror **cannot** be supported by the disclosure of Kurtz et al.

Further, the Office Action's interpretation of light stop 285 reflecting light back toward the micro-mechanical mirror array 280, to an inferred display device of micro-mechanical mirror array 280, is also not supported by the disclosure of Kurtz et al.

Accordingly, as the Office Action's rejections are primarily based on these interpretations of Kurtz et al., it is respectfully submitted that the same are improper, and withdrawal of the finality of the outstanding Office Action is respectfully requested.

#### REJECTION UNDER 35 USC 102

Claims 17-20 stand rejected under 35 USC § 102(e) as being anticipated by Johanson, U.S. Publication 2004/0032739. This rejection is respectfully traversed.

As noted above, it is respectfully submitted that Johanson at least fails to disclose the claimed intercepting unit reflecting a portion of the light emitted from the lamp light source toward the reflector. Johanson further fails to disclose the "so that light emitted from the reflector has an annular light distribution."

Again, as noted previously, Johanson only illustrates first and second reflectors, with a light tube being inserted through a back of the two reflectors, such that light is reflected from a light source in the light tube outwardly from **both** reflectors. As illustrated in FIG. 5, light is reflected outwardly from both reflectors. As further illustrated in FIG. 5, light from the light source

is not reflected off of the second reflector 50 toward the first reflector 40.

In addition, as noted above, the generated light distribution in Johanson is purposefully not annular, as Johanson is particularly directed toward collecting and distributing as much light as possible, compared to the presently claimed intercepting unit which blocks light from being distributed to purposefully generate the annular light distribution.

As described in the specification, such an annular light distribution is helpful in embodiments of the present invention since the display device may be placed within the first light reflector. If the light distribution was not annular, then light would be reflected onto the display device before being reflected off the second reflector.

Therefore, for at least the above, it is respectfully requested that this rejection of claims 17-20 be withdrawn and claims 17-20 be allowed.

Claim 21 stands rejected under 35 USC § 102(b) as being anticipated by Kurtz et al., U.S. Patent No. 6,577,429. This rejection is respectfully traversed.

By way of review and as an example, independent claim 21 sets forth:

“[a] projection system comprising:

a first reflecting mirror;

a second reflecting mirror; and

a display device provided in the surface of the first reflecting mirror;

wherein the second reflecting mirror receives light reflected from the first reflecting mirror and reflects the received light toward the display device.”

For at least the above, it is respectfully submitted that Kurtz et al. at least fails to disclose or suggest the claimed display device provided in the surface of the first reflecting mirror, and wherein the second reflecting mirror receives light reflected from the first reflecting mirror and reflects the received light toward the display device.

Therefore, it is respectfully requested that this rejection of claim 21 be withdrawn and claim 21 be allowed.

## REJECTION UNDER 35 USC 103

Claims 1 and 10-16 stand rejected under 35 USC § 103(a) as being obvious over Kurtz et al., in view of Choi, U.S. Patent No. 6,457,830. This rejection is respectfully traversed.

For at least the above, it is again respectfully submitted that Kurtz et al. fails to disclose or suggest the claimed first reflecting mirror, comprising the display device, reflecting light to the claimed second reflecting mirror which reflects light to the display device.

In addition, Kurtz et al. further fails to disclose that the light reflected toward the display device from the second reflector to the "projection lens unit enlarging and projecting a color image formed by the display device onto the screen."

As noted above, in Kurtz et al., the projection lens is irradiated only when the light stop 285 is not irradiated, i.e., when the micro-mechanical mirror array 280 reflects light to the aperture 290, light is not reflected to the light stop 285, similarly, light is not reflected to aperture 290 when light is reflected to the light stop 285. If the display device is located on the micro-mechanical mirror array 280 then light cannot progress to the second reflector and then the aperture 290 (to the projection lens). Thus, the Office Action's interpretation of Kurtz et al. cannot encompass the claimed projection lens.

It is noted that the Office Action sets forth that Kurtz et al. discloses all the claimed features of claims 1 and 10-16, except for only the claimed color filter separating light emitted from the lighting system, and thereafter relies on Choi to disclose the claimed color filter, stating that it would have been obvious to modify Kurtz et al. to include the color filter of Choi to form a uniform light beam.

Regardless, it is respectfully submitted that Choi fails to disclose or suggest the deficient features in Kurtz et al. Accordingly, it is respectfully submitted that a combination of Kurtz et al. and Choi fails to disclose the presently claimed invention.

Therefore, for at least the above, it is respectfully requested that this rejection of claims 1 and 10-16 be withdrawn and claims 1 and 10-16 be allowed.

Claims 2-9 stand rejected under 35 USC § 103 as being obvious over Kurtz et al., in view of Choi and Johanson. This rejection is respectfully traversed.

As noted above, Johanson fails to disclose or suggest the claimed reflector reflecting light emitted from a lamp light source and an intercepting unit reflecting a portion of the light emitted from the lamp light source toward the reflector.

Accordingly, it is respectfully submitted that any combination of Johanson with Kurtz et al. and/or Choi similarly would fail to disclose the presently claimed invention.

Therefore, for at least the above, it is respectfully requested that this rejection of claims 2-8 be withdrawn and claims 2-8 be allowed.

#### CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

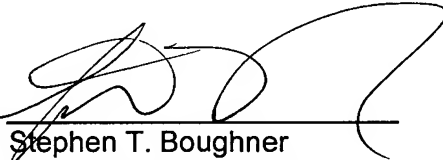
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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